

Appln No.: 09/381,556

Amendment Dated: February 26, 2004

Reply to Office Action of August 26, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A method for production of an autologous vaccine to tumor cells comprising transducing the tumor cells with one or more species of herpes simplex virus amplicon containing the gene for an immunostimulatory protein and at least one additional therapeutic gene to provide transient expression of the immunostimulatory protein and the therapeutic gene product by the cells.
2. (original) The method according to claim 1, wherein the tumor cells are transduced with the herpes simplex amplicons *ex vivo*.
3. (original) The method according to claim 1, wherein the tumor cells are transduced with the herpes simplex amplicon *in vivo*.
4. (currently amended) A method for inducing a protective immune response to tumor cells in a patient comprising the step of transducing the tumor cells with one or more species of herpes simplex virus amplicon containing the gene for an immunostimulatory protein and at least one additional therapeutic gene to provide transient expression of the immunostimulatory protein and the therapeutic gene product by the cells, and administering transduced tumor cells to the patient.
5. (original) The method according to claim 4, wherein the tumor cells are transduced with the amplicon *ex vivo*, further comprising the step of introducing the transduced tumor cells into the patient.
6. (original) The method according to claim 4, wherein the amplicons are injected into the site of the tumor cells *in vivo*.
7. (previously presented) The method according to claim 1, wherein the immunostimulatory protein is a cytokine.
8. (original) The method according to claim 7, wherein the cytokine is interleukin-2.
9. (original) The method according to claim 7, wherein the cytokine is granulocyte macrophage colony stimulating factor.

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10. (previously presented) The method according to claim 7, wherein the immunostimulatory protein is a chemokine.
11. (original) The method according to claim 10, wherein the chemokine is RANTES.
12. (previously presented) The method according to claim 1, wherein the immunostimulatory protein is a intercellular adhesion molecule.
13. (original) The method according to claim 12, wherein the intracellular adhesion molecule is ICAM-1.
14. (previously presented) The method according to claim 1, wherein the immunostimulatory protein is a costimulatory factor.
15. (original) The method according to claim 14, wherein the costimulatory factor is B7.1.
16. (previously presented) The method according to claim 1, wherein a population of tumor cells is transduced with a plurality of species of amplicons containing the genes for the immunostimulatory protein and the additional therapeutic gene.
17. (previously presented) The method according to claim 1, wherein the additional therapeutic gene encodes a second immunostimulatory protein.
18. (currently amended) The method according to ~~any of claims~~ claim 17, wherein the tumor cells are transduced with amplicons encoding and expressing at least two species of cytokines.
19. (original) The method according to claim 18, wherein tumor cells are transduced with amplicons containing the genes for interleukin-2 and interleukin-12.
20. (original) The method according to claim 18, wherein the tumor cells are transduced with amplicons encoding and expressing a cytokine and a costimulatory factor.
21. (original) The method according to claim 20, wherein tumor cells are transduced with amplicons containing the genes for RANTES and B7.1.
22. (previously presented) The method according to claim 1, wherein the tumor cells are hepatoma cells or lymphoma cells.
23. (previously presented) A mixture containing a plurality of species of herpes simplex virus amplicons, including at least a first species of amplicon containing the gene

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for at least one immunostimulatory protein and a second species of amplicon containing the gene for an additional therapeutic gene product.

24. (previously presented) The mixture according to claim 23, wherein the immunostimulatory protein is a cytokine.
25. (original) The mixture according to claim 24, wherein the cytokine is interleukin-2 or granulocyte macrophage colony stimulating factor.
26. (previously presented) The mixture according to claim 23, wherein the immunostimulatory protein is a chemokine.
27. (original) The mixture according to claim 26, wherein the chemokine is RANTES.
28. (previously presented) The mixture according to claim 23, wherein the immunostimulatory protein is a intercellular adhesion molecule.
29. (original) The mixture according to claim 28, wherein the intracellular adhesion molecule is ICAM-1.
30. (previously presented) The mixture according to claim 23, wherein the immunostimulatory protein is a costimulatory factor.
31. (original) The mixture according to claim 30, wherein the costimulatory factor is B7.1.
32. (previously presented) The mixture according to claim 23, wherein the additional therapeutic gene encodes a second immunostimulatory protein.
33. (previously presented) The mixture according to claim 23, wherein the first and second species of amplicons contains genes encoding for RANTES and B7.1.
34. (previously presented) The mixture according to claim 23, wherein the first and second species of amplicons contains genes encoding for at least two species of cytokines.
35. (original) The mixture according to claim 34, wherein the amplicons contain genes encoding for interleukin-2 and interleukin-12.
36. (previously presented) Tumor cells transduced in accordance with the methods of claim 1.
37. (previously presented) Tumor cells transduced with a mixture of herpes simplex virus amplicons in accordance with claim 23.

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38. (previously presented) A method for production of an autologous vaccine to tumor cells comprising transducing the tumor cells with a herpes simplex virus amplicon containing the gene for an immunostimulatory protein to provide transient expression of the immunostimulatory protein by the cells, wherein the immunostimulatory protein is selected from among chemokines, intercellular adhesion molecules and costimulatory factors.
39. (previously presented) The method according to claim 38, wherein the tumor cells are transduced with the herpes simplex amplicons *ex vivo*.
40. (previously presented) The method according to claim 38, wherein the tumor cells are transduced with the herpes simplex cell *in vivo*.
41. (new) The method according to claim 4, wherein the immunostimulatory protein is a cytokine.
42. (new) The method according to claim 41, wherein the cytokine is interleukin-2.
43. (new) The method according to claim 41 wherein the cytokine is granulocyte macrophage colony stimulating factor.
44. (new) The method according to claim 41, wherein the immunostimulatory protein is a chemokine.
45. (new) The method according to claim 44, wherein the chemokine is RANTES.
46. (new) The method according to claim 4, wherein the immunostimulatory protein is a intercellular adhesion molecule.
47. (new) The method according to claim 46, wherein the intracellular adhesion molecule is ICAM-1.
48. (new) The method according to claim 4, wherein the immunostimulatory protein is a costimulatory factor.
49. (new) The method according to claim 48, wherein the costimulatory factor is B7.1.
50. (new) The method according to claim 4, wherein a population of tumor cells is transduced with a plurality of species of amplicons containing the genes for the

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immunostimulatory protein and the additional therapeutic gene.

51. (new) The method according to claim 4, wherein the additional therapeutic gene encodes a second immunostimulatory protein.
52. (new) The method according to claim 51, wherein the tumor cells are transduced with amplicons encoding and expressing at least two species of cytokines.
53. (new) The method according to claim 52, wherein tumor cells are transduced with amplicons containing the genes for interleukin-2 and interleukin-12.
54. (new) The method according to claim 18, wherein the tumor cells are transduced with amplicons encoding and expressing a cytokine and a costimulatory factor.
55. (original) The method according to claim 20, wherein tumor cells are transduced with amplicons containing the genes for RANTES and B7.1.
56. (previously presented) The method according to claim 1, wherein the tumor cells are hepatoma cells or lymphoma cells.